Reliability Report Data 2002-2011 Investor-Owned Utilities

This report summarizes the reliability indices reports filed by each of the investor-owned utilities, in compliance with 170 IAC 4-1-23(e). Reliability data is shown for the time period 2002 through 2011.

Each utility reported its indices with and without major events. Major events are storms or weather events that are more destructive than normal storm patterns. The utilities do not all define a "major event" exactly the same; therefore some utilities will capture more of their service interruptions in the "without" category than other utilities. This is one reason why one should avoid making direct comparisons among the utilities based on the indices. Service territory geography and size and customer mix are also factors that make direct comparison of the indices among the utilities difficult.

Three separate reliability indices were reported by each of the utilities:

- <u>System Average Interruption Frequency Index (SAIFI)</u>: the total number of customer interruptions divided by the total number of customers (average interruptions per customer).
- System Average Interruption Duration Index (SAIDI): the sum of all customer interruption durations (in minutes) divided by the total number of customers (average minutes of interruption per customer).
- <u>Customer Average Interruption Duration Index (CAIDI)</u>: SAIDI divided by SAIFI (average minutes per interruption).

"Major Events" (Weather) Summary

The following table summarizes the number of major event days each utility reported having in 2011. In addition to the major events below, IPL stated it had 19 storm events, NIPSCO stated it experienced an additional 20 weather events it considered severe, and Vectren stated major thunderstorms in June that did not meet its major event day definition resulted in a significant increase in its indices. It should be noted that one storm system can potentially cause multiple major event days.

Utility	Major Event Days			
NIPSCO	22			
IPL	0			
I&M	4			
Duke Energy Indiana	12			
Vectren	9			

Electric Reliability: Including Major Events*										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
NIPSCO**		i I			,	, ,		·	,	
SAIFI	1.41	1.65	1.38	1.24	1.40	2.23	1.80	0.88	1.36	1.38
SAIDI	542	498	317	258	317	1,073	882	140	505	371
CAIDI	385	302	229	208	227	480	490	158	372	269
PSI/Duke		ı J	ı ,	1 1	ı J	, ,	!	 	1 '	1
SAIFI	1.57	1.58	1.66	1.59	1.63	1.41	2.48	1.76	1.58	2.07
SAIDI	170	201	255	282	203	178	689	293	195	630
CAIDI	109	128	153	177	125	126	278	166	124	304
IPL	l l	ı J	, ,	1 1	ı J	, ,	!	1	1 '	1
SAIFI	1.17	0.90	0.81	0.90	1.07	0.76	1.54	1.1	1.04	0.86
SAIDI	133	98	77	67	105	47	359	158	71	75
CAIDI	113	108	94	74	98	62	233	145	68	88
Vectren		ı J	ı ,	1	ı J	, ,	!	 	1 '	1
SAIFI	1.46	1.27	2.36	2.05	1.87	1.23	2.33	2.56	1.02	2.16
SAIDI	164	111	932	376	241	89	859	2,889	90	711
CAIDI	107	87	395	185	128	72	369	1,126	88	330
I&M	l l	ı J	, ,	1 1	ı J	, ,	!	1	1 '	1
SAIFI	1.68	1.56	1.42	1.31	1.24	1.24	1.63	0.91	0.98	1.12
SAIDI	931	594	291	1,132	222	199	1,164	122	392	258
CAIDI	554	380	205	863	179	161	713	133	400	230

Notes

SAIFI: System Average Interruption Frequency Index; (total # of customer interruptions) / (total # of customers)

SAIDI: System Average Interruption Duration Index; (duration or time of service interruptions) / (total # of customers)

CAIDI: Customer Average Interruption Duration Index; (SAIDI) / (SAIFI)

*Major events are storms or weather events that are more destructive than normal storm patterns. The same definition of "major event" is not used by all utilities.

**NIPSCO's 2007 report updated values for 2004-2006 based on accepted industry standard IEEE Std 1366 - the values above reflect these revisions.

Electric Reliability: NOT Including Major Events*										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
NIPSCO**										
SAIFI	1.15	1.45	1.22	1.09	1.21	1.06	1.11	0.88	0.94	0.92
SAIDI	196	350	213	181	196	180	199	140	122	126
CAIDI	171	242	175	166	163	169	179	158	130	137
PSI/Duke										
SAIFI	1.36	1.22	1.21	1.27	1.32	1.23	1.26	1.3	1.32	1.27
SAIDI	134	127	124	138	136	133	146	133	138	146
CAIDI	98	103	102	109	103	109	116	102	104	115
IPL										
SAIFI	1.03	0.79	0.71	0.90	1.07	0.76	1.04	0.94	1.04	0.86
SAIDI	74	66	53	67	105	47	81	81	71	75
CAIDI	72	83	75	74	98	62	78	86	68	88
Vectren										
SAIFI	1.46	1.27	1.12	1.68	1.51	1.23	1.42	1.2	1.02	1.43
SAIDI	164	111	107	137	151	89	133	110	90	137
CAIDI	107	87	95	82	100	72	94	92	88	96
I&M										
SAIFI	1.12	0.95	1.25	1.00	1.12	1.11	1.12	0.83	0.74	0.99
SAIDI	179	129	194	171	147	139	144	90	111	154
CAIDI	159	135	156	171	131	126	129	109	151	156

Notes

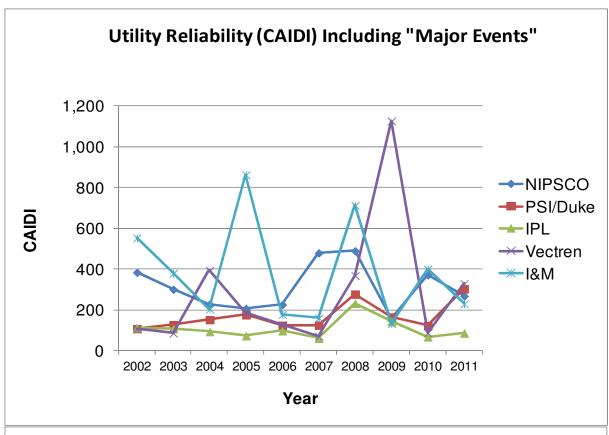
SAIFI: System Average Interruption Frequency Index; (total # of customer interruptions) / (total # of customers)

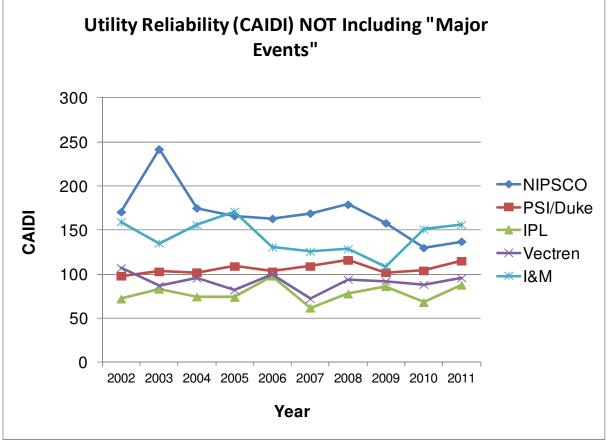
SAIDI: System Average Interruption Duration Index; (duration or time of service interruptions) / (total # of customers)

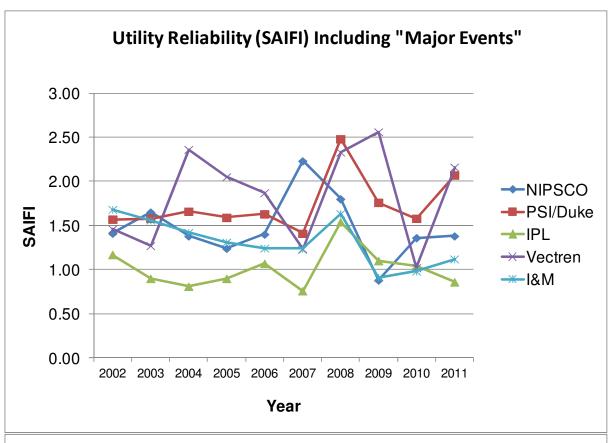
CAIDI: Customer Average Interruption Duration Index; (SAIDI) / (SAIFI)

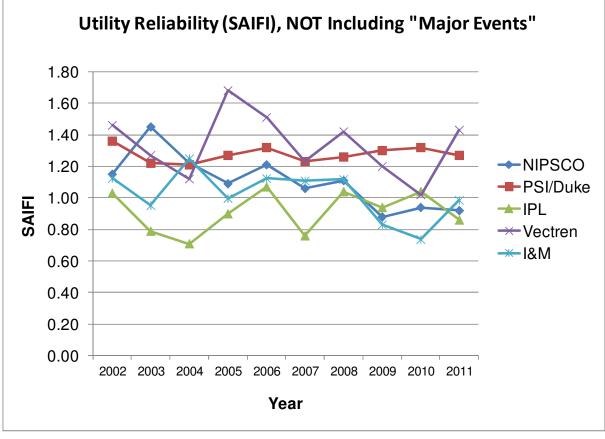
*Major events are storms or weather events that are more destructive than normal storm patterns. The same definition of "major event" is not used by all utilities.

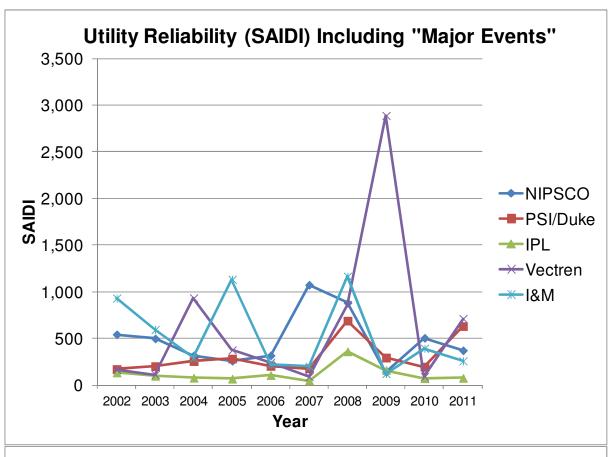
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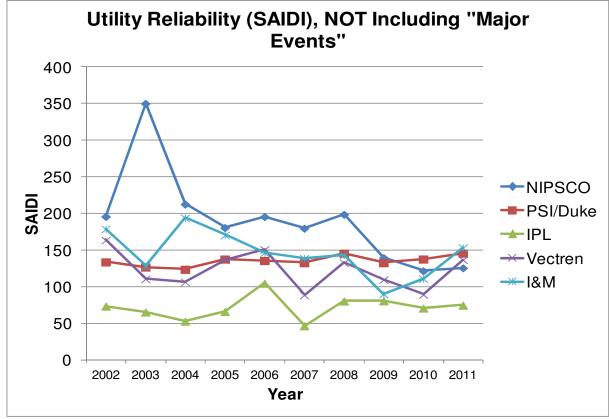












Comparison of 2011 Indices with 2002-2010 Average Indices (Without Major Events)									
_	2011	2002-2010 Avg.	2011 Diff Vs Avg	2011 % Diff Vs Avg					
NIPSCO*									
SAIFI	0.92	1.12	-0.20	-18%					
SAIDI	126	198	-72	-36%					
CAIDI	137	172	-35	-21%					
PSI/Duke									
SAIFI	1.27	1.28	-0.01	-1%					
SAIDI	146	134	12	9%					
CAIDI	115	105	10	9%					
IPL									
SAIFI	0.86	0.92	-0.06	-7%					
SAIDI	75	72	3	5%					
CAIDI	88	77	10	13%					
Vectren									
SAIFI	1.43	1.32	0.11	8%					
SAIDI	137	121	16	13%					
CAIDI	96	91	5	5%					
I&M									
SAIFI	0.99	1.03	-0.04	-4%					
SAIDI	154	145	9	6%					
CAIDI	156	141	15	11%					

*NIPSCO's 2007 report updated values for 2004-2006 based on accepted industry standard IEEE Std 1366. The averages above reflect these revisions.